

REMARKS

The claims have been amended as supported by the specification as originally filed. No new matter has been added through these amendments.

Claims 50-70 are currently pending, although claims 68-70 have been withdrawn. Upon indication of allowable subject matter, Applicants currently intend to seek rejoinder of at least one of the withdrawn claims as appropriate.

The Office Action rejected claims 50-60 and 63-67 under 35 U.S.C. § 103 as obvious over U.S. patent 6,054,112 ("US 112") or in view of U.S. patent 5,919,430 ("US 430"). In view of the following remarks, Applicants respectfully request reconsideration and withdrawal of these rejections.

The claimed invention relates to processes where the solid material separated from its mother liquor is calcined prior to subjecting the solid material (or shaped body obtained from the solid material) to the required water treatment. Also, the claimed invention requires at least partial crystallization of the solid material prior to the required water treatment. The claimed invention relates to processes (or products obtained by such processes) in which template compounds are removed from solid material (by calcination) prior to the required water treatment. The claims state that the solid material or the shaped body is brought in contact with deionized water **at a temperature between 120°C and 175°C for a duration of 12 to 24 hours**. The applied art neither teaches nor suggests this invention.

Applicants submit that there is a the difference between a regular washing step according to the prior art and the water treatment at elevated temperatures according to the present invention. A feature "washing" according to the prior art clearly refers to a water treatment wherein a given composition is rinsed with water and, thus, brought into contact with water only for a comparatively short period of time. Further, US 112 (which is used as

closest prior art document by the Examiner) clearly indicates that washing is a deionized water treatment **at ambient temperature**. Column 4, lines 32-49 of US 112 gives the precise temperatures for each treatment stage as follows:

- The basic reaction mixture is heated to 35 °C (line 35).
- Stirring of the mixture is carried out at this temperature (35 °C) for half an hour (line 36).
- Crystallization is carried out at 175 °C for 24 h (line 41).
- Drying is carried out at 90 °C (line 45).
- Calcination is carried out at 500 °C (line 46).
- Treatment with ammonium acetate is carried out at 80 °C (line 47).
- Further calcination is carried out at 500 °C (line 49).

Consequently, **in each case where the temperature is different from ambient temperature, the precise temperature is explicitly indicated in the specific examples of US 112**. The same holds for the respective general disclosure of US 112, in column 3, lines 26-36.

The only step of the whole process of US 112 which is described without any temperature value is the washing stage. Reference is made to column 4, lines 44 and 48, respectively, and to column 3, line 33.

From this difference between the respective characterizations of the individual process steps of US 112 (with and without a specific temperature), the skilled person would have derived from the overall teaching of US 112 that the temperature to be applied during the washing with deionized water should be carried out at ambient temperature. This teaching in particular follows from column 4, lines 43-49. There, for the treatment with an ammonium acetate solution, a temperature of 80 °C is disclosed. As far as the following step of washing with deionized water is concerned, however, US 112 is silent with respect to the

temperature. Thus, if the temperature had been of concern or decisive for the washing step, US 112 clearly would have disclosed such increased temperature. However, in complete absence of any temperature values for the washing with deionized water, the skilled person can't help but assuming that washing, i.e. treatment with deionized water, has to be carried out at ambient temperature.

In no way it is justified to assume that based on the above-discussed teaching of US 112, the skilled person would have assumed that washing with deionized water could be carried out temperatures of from 120 to 175 °C according to the present invention.

Further, US 430 contains no hint whatsoever from which the skilled person might have derived that washing with deionized water should be carried out at a temperature of from 120 to 175 °C.

The only disclosure of US 430 concerning a treatment at such temperature is the synthesis of the material, i.e. a hydrothermal crystallization process which is carried out at preferably 150 to 190 °C (column 4, line 54) or preferably 70 to 150 °C (column 4, lines 57-58). Specific values are, e.g., 175 °C (column 5, line 14; examples 1 and 3).

Thus, also the combination of US 112 with US 430 provides no hint for the skilled person to carry out a washing step, after having crystallized and calcined a solid material, at such high temperatures of from 120 to 175 °C.

In order to clarify even better that neither US 112 nor US 430 nor an alleged combination of these documents would have guided the skilled person to subject-matter of amended Claim 50, it is noted that **a combination of a treatment temperature of 120 to 175 °C and a duration of this treatment of from 12 to 24 hours is exclusively disclosed for the synthesis step wherein the crystalline material is prepared.**

Column 3, lines 30-31 of US 112 describes a crystallization time of 24 h, in the context of the crystallization temperature of 170 to 190 °C as disclosed in the same

paragraph, column 3, line 28. Example 1 of US 112 describes a respective combination of 24 h with 175 °C for the synthesis stage (column 4, line 41); Example 2 describes a respective combination of 48 h and 175 °C (column 5, line 8). **As far as the duration of the washing step is concerned, US 112 is completely silent.**

The same observations also apply to US 430: in Example 1, e.g., a combination of 24 h and 175 °C is disclosed (column 6, line 21); the same applies to Example 3 (column 7, lines 8-9). As far as the duration of the washing step is concerned, US 430 is also completely silent.

Therefore, both US 112 and US 430 disclose temperatures similar to the washing temperatures of 120 to 175 °C according to Claim 50 and periods similar to the washing periods of claim 50 (12 to 24 h) only in the context of the crystallization stage whereas in the context of the washing stage, in the context of a post-synthesis step, neither US 112 nor US 430 contains any specific values for temperature and time.

Thus, if at all, the skilled person would have learned from US 112 and US 430 to carry out the synthesis of the crystalline, solid material at a temperature of, e.g. 175 °C and for a period of, e.g. 24 hours. In no way, however, the skilled person would have learned from US 112 and US 430 to carry out a deionized water treatment step at a temperature of from 120 to 175 °C for a period of 12 to 24 hours. Any other assessment clearly would be based on a hindsight analysis, fully aware of subject-matter of Claim 50 of the present invention.

Finally, neither US 112 nor US 430 would have guided the skilled person to an alleged transfer of the reaction conditions applied during synthesis of the crystalline material to the post-synthesis stage of a water treatment of the crystalline material.

Quite the contrary: from the examples of both applications, the skilled person would have learned that washing the synthesized material should be carried out at ambient

temperature. In this context, Example 1 of US 112 shall be discussed in detail. According to this example, synthesis takes place at 175 for 24 hours (column 4, line 41). One synthesis is complete, the solid obtained is separated by centrifugation. Clearly, in the absence of any contrary teaching, the skilled person has to assume that during separation by centrifugation, the solid material is cooled down to ambient temperature. Consequently, the downstream step of washing refers to this (ambient) temperature. Consequently, this analysis shows the US 112 teaches the skilled person away from applying temperatures of the synthesis process to the downstream washing step. (Needless to say that the same applies to Example 2 of US 112, Examples 1, 3, 5, 6, 7, 8, 9, 10, and 11 of US 430).

Thus, US 112, US 430 or an alleged combination thereof not only contains no hint to subject-matter of Claim 50- it even teaches away from subject-matter of Claim 50.


Since it is shown that the cited prior art does not teach subject-matter of the claims, it is believed that also the Examiner's objection according to which the "*limitations such as the claimed UV/VIS characteristics are considered to flow from the process of making a product as taught by Hasenzahl et al. '112*" should be withdrawn.

In view of the above, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. §103.

Applicants believe that the present application is in condition for allowance. Prompt and favorable consideration is earnestly solicited.

Respectfully submitted,

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